

## User Guide

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150Mbps Portable 3G Wireless Router

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# Chapter 1 Product Overview

## 1.1 Overview

Thank you for purchasing this 3G150B 150Mbps Portable 3G Router/ Wireless AP/ Wireless Router (hereinafter referred as the device).

3G150B, adopting IEEE802.11n standard, backwards compatible with IEEE802.11b/g standards, combines 3G, WiFi, and routing, etc technologies that support wired/ 3G wireless Internet access. Being able to be powered either by battery or USB cable, featuring exquisite design, ease to carry, user-friendliness, it is the best choice for smart notebook, Ipad, MID, etc WiFi devices to access mobile Internet.

This 3G150B supports 3 working modes to implement various wireless applications:

**Wireless AP Mode:** This is the default mode which can be used as a converter between wired and wireless signals. For example, when the device is connected to broadband Internet using a network cable, multiple computers can share Internet connection wirelessly without configuration.

**3G Router Mode:** System automatically switches to this mode when a 3G modem card is inserted into the device's USB port and Multi-computer can then share the 3G network service. It is

especially suitable for users who do not have the convenience of accessing fixed broadband or users who are in need of a mobile shared Internet access solution.

**Wireless Router Mode:** To access this mode, go to the utility of the router, enable Wireless Router and save settings before exit. Connect it to your ADSL/Cable modem and multi-computers share Internet access wirelessly.

In addition, this device is powered by a Lithium Ion-battery or over USB, enabling you to flexibly establish wireless network anywhere anytime.

With powerful functions, 3G150B is suitable for various wireless applications. What is more, with exquisite, compact and portable design, it is the ideal mobile Internet solution for people who travel.

## **1.2 Features**

- Supports 802.11n, 802.11g, 802.11b, 802.3, 802.3u
- Supports EVDO/WCDMA/TD-SCDMA 3G modes
- Supports 3G Router, wireless AP and wireless router working modes
- Delivers wireless speed up to 150Mbps
- Provides 1\*10/100Mbps auto-negotiation Ethernet port as a LAN/WAN port
- Supports WPA-PSK, WPA2-PSK, WPA&WPA2-PSK, etc encryptions
- Supports hidden SSID

- Built-in firewall against hacker attack
- Provides syslog to record router's usage status
- Supports to prohibit LAN clients from accessing Internet
- Supports SNTP, UPnP, DMZ and Virtual server

### **1.3 Package Contents**

Please unpack the box and check the following items:

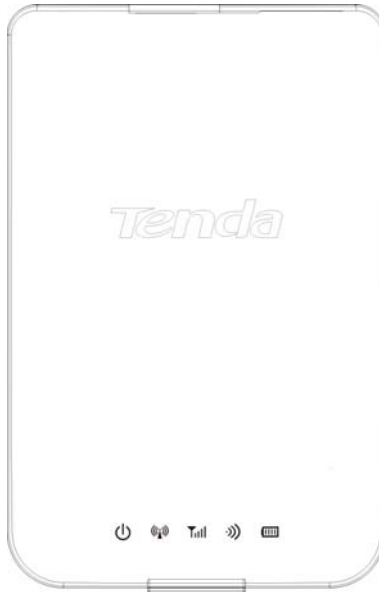
- 3G150B 150Mbps Portable 3G wireless Router
- Lithium Battery
- Power Adapter
- Quick Installation Guide
- Manual on CD
- USB cable

If any of the above items are incorrect, missing, or damaged, please contact your Tenda reseller for immediate replacement.


**Note: *Using a power supply with a different voltage rating than the one included with the 3G150B will cause damage.***


## 1.4 Panel Overview


### 1.4.1 Top Panel-----LED overview




#### **LED overview (from L to R):**


 : Power LED. A solid blue light indicates a proper connection to the power supply.

 : AP/Wireless router mode LED. A solid blue light indicates device is working in AP or wireless router mode.

 : 3G mode LED. A solid blue light indicates a successful 3G connection.



 : Wifi LED. A blinking blue light indicates the device's WIFI feature is enabled successfully and functions normally.

 : Battery capacity LED. A solid blue light indicates that the battery is fully charged or USB power cord is correctly connected (with no installed battery), a green light indicates the battery is being charged up and a red light indicates the battery capacity reaches threshold (3.3V).

### 1.4.2 Side Panel---Button Overview



**RESET:** Press this button for 7 seconds to restore factory default settings.

**ON/OFF:** Power Switch: turn on/off the device's power supply and the corresponding LED on top panel will light up or off.

**POWER:** Mini USB power receptor for connecting to the supplied power adapter or PC's USB port via a USB cable.

### 1.4.3 Rear Panel View



**Port Overview:** (From L to R)

**LAN/WAN:** The 100Mbps LAN/WAN Ethernet port. In Wireless

Router mode, it is used as a WAN port to connect to a DSL MODEM or superior equipment, etc. While in 3G Router or AP mode, it is used as a LAN port to connect to a PC or Ethernet Switch, etc.

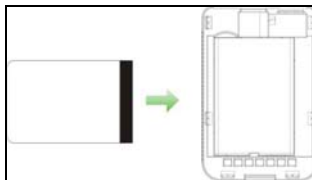
**USB:** USB 2.0 port for 3G USB Modem connection, such as TD-SCDMA, CDMA2000, and WCDMA modem cards, etc.

## Chapter 2 Hardware Installation

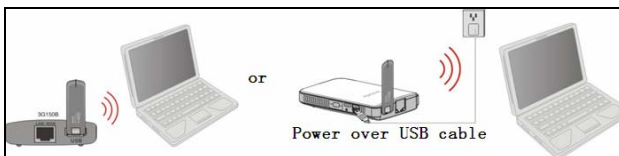
### 2.1 Installation

Please follow the steps below for correct connection before configuring the device. For better wireless performance, place it in the center of wireless coverage area.

1. Please install the included Li-battery in the device.



2. Power the device: via battery, power adapter, notebook or computer.



**Note:**

**1) Apart from the above powering methods, you can also power the device by using the included Y-shaped USB cable to connect to a notebook or computer.**

**2) Check whether battery is fully charged or not before you leave home.**

3. Battery charge:

1. To ONLY charge the battery, Charge the device through power adapter or computer and keep the power turned off in the meantime. The battery LED keeps blue when fully charged.

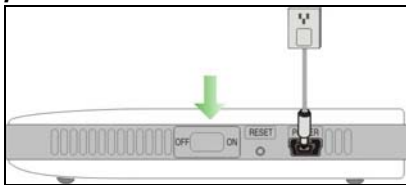
2. To charge the battery and keep the device working simultaneously, Charge the device through power adapter or computer and keep the power turned on in the meantime.

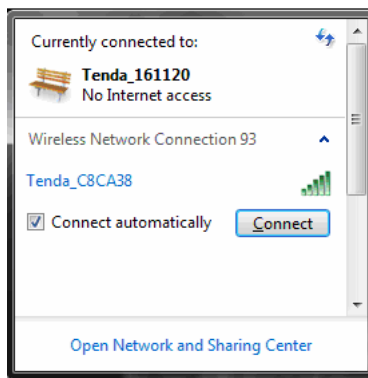
**Note:**

**1. For the fifth LED (Battery capacity status) on the device, always blue indicates full capacity, green indicates the device is being charged up and red indicates the battery capacity reaches threshold (3.3V).**

**2. Please remove the battery from the device in case of long-term inactivity.**

**4. Turn on the power switch.**

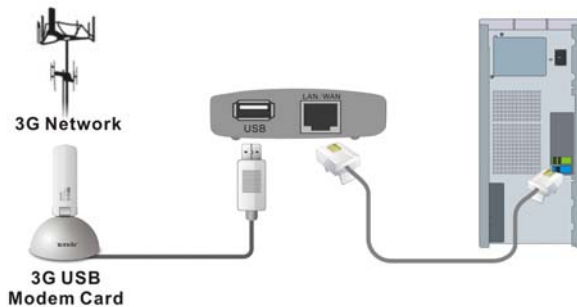


**5. Connect a to the router's USB port.****6. Connect your PC with wireless network adapter enabled to the router wirelessly: select the corresponding wireless network name (SSID) and click the "Connect" button on the bottom right corner as shown in the screen below.**

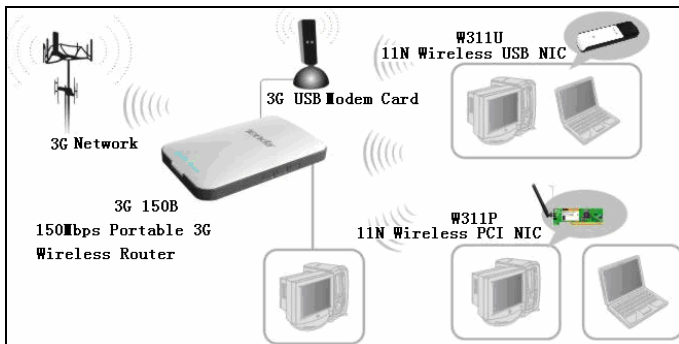
## 2.2 Application

### 2.2.1 In 3G Router Mode

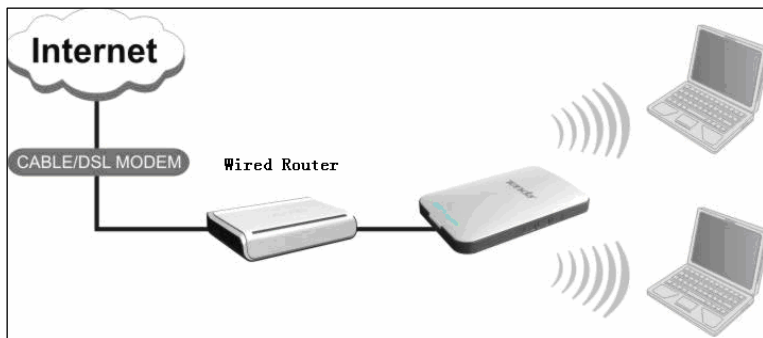
A. If you are using a wired network adapter, please follow the diagram below for connection:



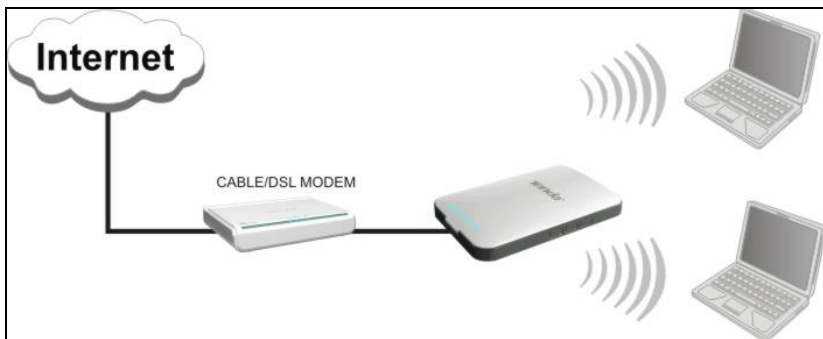
B. If you are using a wireless network adapter, please follow the diagram below for connection.



### 2.2.2 In Wireless AP Mode



### 2.2.3 In Wireless Router Mode



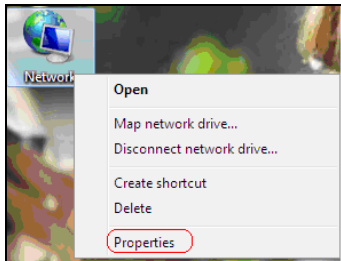
## Chapter 3 Login to the Web-based Utility

This chapter mainly presents how to enter the Router's Web-based configuration interface. In 3G Router/ wireless AP mode, it is recommended that you configure the router via wired connection. In wireless router mode, you can only configure the router via wireless connection. The default login IP address is: 192.168.2.1.

### 3.1 Configuring Wired Connection

To configure the wired connection, follow the steps below:  
The configuration method is explained using Windows 7.

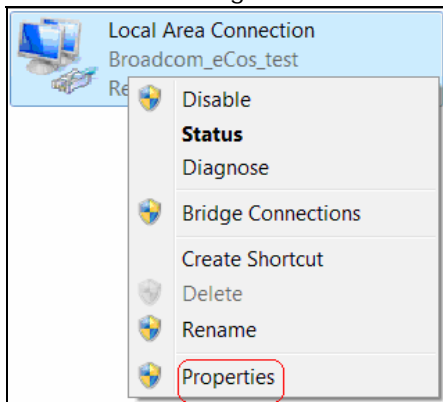
**Step1.** Right click "Network" on your computer desktop and select "Properties".



**Step2.** Left click "Change adapter settings" on the appearing window.

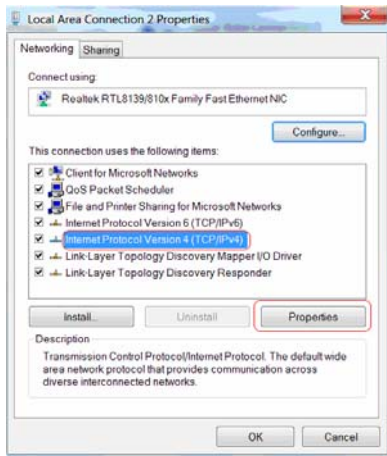


**Step3.** Right click "Local Area Connection" (Select "Wireless Network Connection", if you are using wireless connection.) and select "Properties" in the following window.



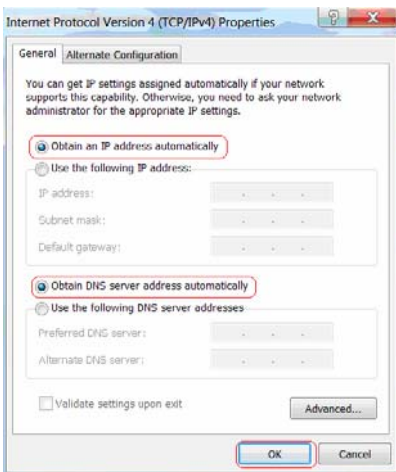
**Step4.** Select "Internet Protocol Version 4(TCP/IPv4)" and then click "Properties" in the appearing window.



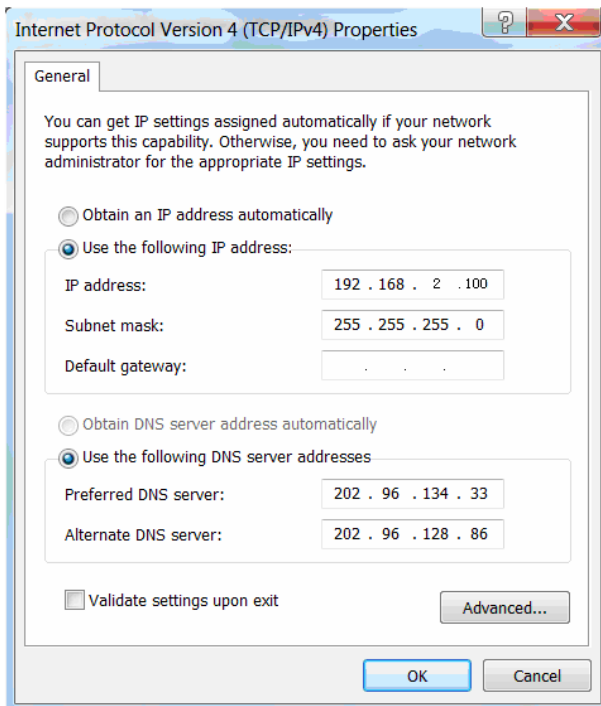


**Step4.** There are 2 ways to configure your PC's IP address in this TCP/IPv4.

A. The first one is "Obtain an IP address automatically" as below:



B. The second one is “Use the following IP address” as below:



In the IP Address field, Input: 192.168.2.XXX (XXX stands for any value from 2 to 254) and in the Subnet Mask field, input: 255.255.255.0

For example:

IP Address: 192.168.2.100

Subnet Mask: 255.255.255.0

DNS Server: you can either enter your local DNS server addresses

(Consult your ISP if you are not clear about them.) or use the device as a proxy DNS server.

After you finish all configurations, click “OK” to submit and click the “OK” button for properties on Local Area Connection interface to save them.

## 3.2 Configuring Wireless Connection

If you switch the device to Wireless Router mode, you can only access the Router’s web interface using a PC with an installed wireless network adapter.

### Step1. View wireless connections

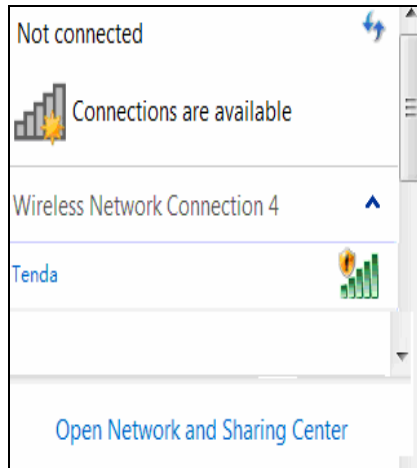
Right click “Network” and left click “Change adapter settings” to open network connection screen. And you can see the wireless connection is shown “Not connected”.



**Step2.** To configure the wireless network adapter’s IP address, right click wireless network connection on the above screen and then refer to chapter 3.1-step 4 and 5 for further configurations. Right click “Wireless Network Connection” and select “View available wireless networks”

**Step3.** All detected wireless signals will be shown in the interface

below, select the SSID entitled "Tenda". If you don't find it, please click "Refresh Network List".

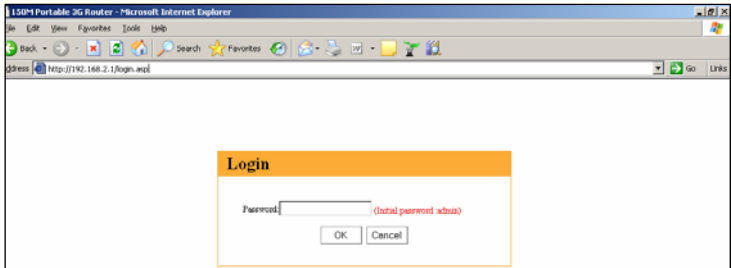


**Step4.** Left click "Tenda" And then click "Connect" to connect to the device.

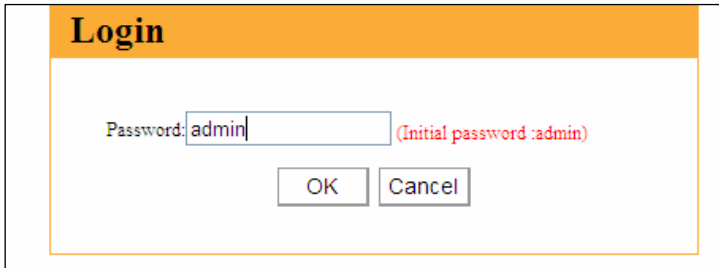
### 3.3 Log in to the Web-based Utility

After finishing your computer's network adapter configuration according to chapter 3.1 or 3.2, you can follow the steps below to log in to the Router's web interface:

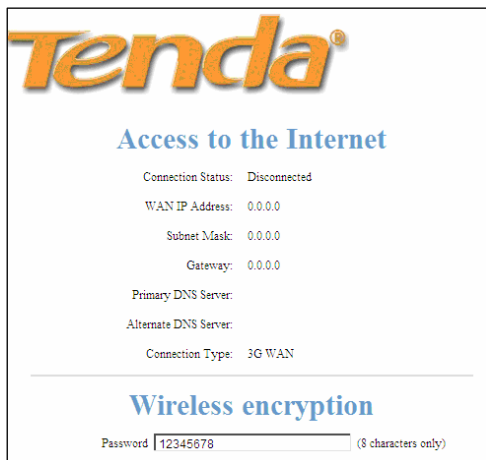
**Step1.** Open a web browser, enter `http://192.168.2.1` in the address bar and then press "Enter".



**Step2.** Input the default Password "admin" and click "OK".



**Step3.** If you have inserted a 3G modem into the device (Then system may have switched to 3G mode automatically) and entered a correct password, you will come to the page below:



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### Access to the Internet

Connection Status: Disconnected

WAN IP Address: 0.0.0.0

Subnet Mask: 0.0.0.0

Gateway: 0.0.0.0

Primary DNS Server:

Alternate DNS Server:

Connection Type: 3G WAN

---

### Wireless encryption

Password  (8 characters only)

**Step4.** If you have not inserted a 3G modem card into the device (Then system is in its default mode of Wireless AP) but have entered a correct password, you will come to the page below:



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### Access to the Internet

Enable Wireless Router  Yes  No

---

### Wireless encryption

Password  (8 characters only)

## Chapter 4 Quick Internet Connection Setup

This chapter instructs you to setup Internet Connection quickly in three different modes.

### 4.1 In 3G Router Mode

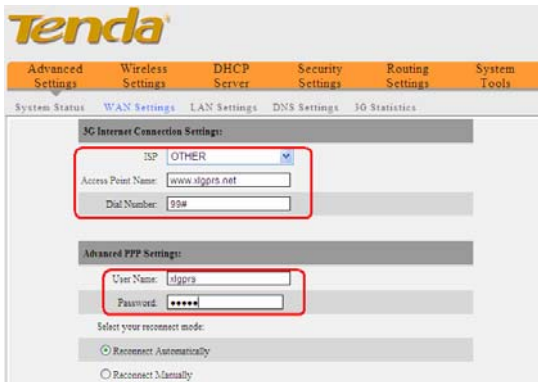
The device supports auto-switch between different modes and the default mode is wireless AP. Once a 3G USB modem card is inserted to the device's USB port, system will automatically switch to the 3G Router mode and dialup for Internet access, without requiring configurations from users. Normally, it takes 2 minutes to achieve successful Internet access. However, if you are unable to access Internet successfully after 2 minutes and your 3G modem card is included in the Compatibility List of 3G Modems (Appendix 5), then log in to the Web-based management interface to check the system status as below:



If the Connection Status field displays “Disconnected”, click “Advanced Settings” > “WAN Settings”, then select your ISP (System may not automatically dialup if the device’s network environment is different from that of your 3G modem; in this case, you need to select your ISP.) from the provided list on the screen below if available, and then click the “OK” button.



If your ISP is not included in the list, please select “OTHER” and inquire your ISP for the relevant parameters, and then input and save them.



**Step 1:** Select your ISP from whom you applied the 3G service.



And in case your ISP is not in the provided list, select "OTHER".

**Step 2:** Enter the name of the AP provided by your ISP.

**Step 3:** Enter dialup information provided by your ISP.

**Step 4:** Enter the Username and password provided by your ISP.

For example: Provided that your ISP is not in the list, then enter "www.xlgprs.net" for Access Point Name, "\*99#" for dialup, "xlgprs" for username and "proxl" for password and then click the "OK" button.

For other options, just leave them blank, if your ISP has not provided you with relevant information.

Note: In 3G router mode, the device's 3G mode LED  displays a solid blue light.

## 4.2 In Wireless AP Mode

The 3G150B is set to wireless AP mode by default. In this mode, as the converter between the wired and wireless signals, it provides a central access point for wireless clients (Here the term "wireless clients" mainly refer to computers with installed wireless network adapters) and allows them to access simultaneously to the wireless network. To implement Internet connection share in this mode, simply connect the 3G150B to a broadband interface with a network cable, eliminating the trouble to configure the device, and set all such computers to "Obtain an IP address automatically". (Normally, a broadband router on the network, which is designed with a built-in DHCP server, will assign IP addresses to such PCs).

**Note:** *In AP mode, the device's AP mode LED  displays a solid blue light.*

## 4.3 In Wireless Router Mode

In wireless router mode, you can directly connect the 3G150B to broadband devices such as DSL modem, and CABLE modem or a broadband cable.

To establish Internet connection quickly in this mode, first log in to

the router's management interface following instructions in chapter 3 and then do as follows:

#### 4.3.1 Next to where it says “Enable Wireless Router”, click on the “Yes” button.



**NOTE:** In Wireless Router mode, the LAN/WAN port functions as a WAN port only. So once enabling this mode, you can only use a wireless connection (a computer with an installed wireless network adapter) to re-log in to the device's Web-based utility (Refer to chapter 3.3). To wirelessly connect to the device, you need to set your computer to “Obtain an IP address automatically” (Refer to appendix 1) or configure a valid IP for your computer (Refer to chapter 3.1).

### 4.3.2 Select your Internet connection type

Select the type of Internet connection you will use on your WAN connection.

#### A. Select ADSL virtual dialup (PPPoE)

ADSL virtual dialup is the device's default Internet connection type. Enter the username and password provided by your ISP and click "OK". Inquire your ISP if you forget or are not clear about this information.

For example: If you are provided with pppoe\_user as username and pppoe\_passwd as password by your ISP, and you want to setup a wireless security key, just enter them and click "OK" to finish the settings. Note: the wireless security key can only consist of 8 characters and is 12345678 by default.

**Tenda**

### Access to the Internet

Enable Wireless Router  Yes  No

Access Method  ADSL Dial-up  DHCP

Access Account:

Access Password:

Note: Once you enable the Wireless Router feature, you can only use a wireless connection to re-access this Web-based utility.  
If you are using other Internet connection types, please click the 'Advanced Settings' tab.

### Wireless encryption

Password:  (8 characters only)

OK Cancel

#### B. Select Dynamic IP (DHCP)

Select "Dynamic IP" if your ISP provides dynamic IP for your Internet connection (This means that you may obtain a different IP

for each connection) and enter a wireless security key, and then click “OK”. Note: the wireless security key can only consist of 8 characters and is 12345678 by default.

Advanced Settings

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## Access to the Internet

Enable Wireless Router:  Yes  No

Access Method:  ADSL Dial-up  DHCP

Note: Once you enable the Wireless Router feature, you can only use a wireless connection to re-access this Web-based utility.

If you are using other Internet connection types, please click the 'Advanced Settings' tab.

---

## Wireless encryption

Password:  (8 characters only)

OK Cancel

**Note: if you are using other Internet connection types, click on the “Advanced” tab on the right top corner of the screen to enter WAN Settings screen (Refer to chapter 5).**

### 4.3.3 Switching to Wireless Router Mode

You need to change from the factory default mode (The 3G150B is set to wireless AP mode by default) to wireless router mode first and click on the “Advanced Settings” tab to enter WAN Settings screen for more configuration if your ISP does not provide the above 2 Internet connection types.

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**Access to the Internet**

Enable Wireless Router:  Yes  No

Access Method:  ADSL Dial-up  DHCP

Note: Once you enable the Wireless Router feature, you can only use a wireless connection to re-access this Web-based utility.

If you are using other Internet connection types, please click the 'Advanced Settings' tab.

**Wireless encryption**

Password: 12345678 (8 characters only)

OK Cancel

To do this, click on the “Yes” button next to where it says “Enable Wireless Router”, and then click on the “OK” button on the screen above to wait for device to restart.

In the event that you want to re-switch to AP mode, click on the “No” button next to where it says “Enable Wireless Router”, and then click on the “OK” button on the screen below.

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**Access to the Internet**

Enable Wireless Router:  Yes  No

Access Method:  ADSL Dial-up  DHCP

Note: Once you enable the Wireless Router feature, you can only use a wireless connection to re-access this Web-based utility.

If you are using other Internet connection types, please click the 'Advanced Settings' tab.

**Wireless encryption**

Password: 12345678 (8 characters only)

OK Cancel

## Chapter 5 Advanced Settings

### 5.1 LAN Settings

This section mainly presents how to configure the TCP/IP parameters of the router's LAN port. Configuration interfaces vary depending on different modes.

#### 5.1.1 Configuring LAN parameters in 3G Router mode/ Wireless Router mode

In 3G Router mode and Wireless Router mode, please configure the LAN port parameters as the diagram below (NOTE: In wireless router mode, the LAN parameters can be only configured via wireless connection).

The screenshot shows a web-based configuration page for LAN settings. The page title is "This page is used to set the basic network parameters for LAN." The form contains three input fields: "MAC Address" with the value "00:0C:43:30:50:18", "IP Address" with the value "192.168.2.1", and "Subnet Mask" with the value "255.255.255.0". Below the fields are "OK" and "Cancel" buttons. On the right side, there is a "Help information" box that reads: "Set the router's LAN IP and Subnet Mask. The default IP Address is 192.168.2.1 and the default Subnet Mask is 255.255.255.0."

- **MAC Address:** Displays the router's LAN MAC address, which can not be changed.
- **IP Address:** Enter the Router's LAN IP address (not your PC's IP address). The default value is 192.168.2.1.
- **Subnet Mask:** Enter the Router's LAN subnet mask. The default value is 255.255.255.0.

## 5.1.2 Configuring LAN parameters in Wireless AP Mode

The screenshot shows the 'LAN Settings' page of a Tenda router. At the top, there is a navigation bar with 'Advanced Settings', 'Enable Router', 'Wireless Settings', and 'System Tools'. Below this, the 'LAN Settings' section is active. It contains a 'System Status' tab and a 'LAN Settings' tab. The 'LAN Settings' tab is selected, and it displays the following fields: 'MAC Address' (00:0C:43:30:50:18), 'IP Address' (192.168.2.1), 'Subnet Mask' (255.255.255.0), 'Gateway' (192.168.2.254), 'Primary DNS Server' (0.0.0.0), 'Alternate DNS Server' (0.0.0.0), and 'Hostname' (Tenda) with an '(optional)' label. A 'Help information' section on the right provides instructions on setting the LAN IP and Subnet Mask. At the bottom, there are 'OK' and 'Cancel' buttons.

- **MAC Address:** Displays the device's LAN MAC address, which can not be changed.
- **IP Address:** The device's LAN IP address (not your PC's IP address). The default value is 192.168.2.1. If you change it, you need to use the new IP to log in to the Web interface.
- **Subnet Mask:** The device's LAN subnet mask. The default value is 255.255.255.0.
- **Gateway:** Input the Gateway address provided by your ISP. If you are not sure about it, please inquire your ISP or network administrator.
- **Primary DNS Address:** Enter the Primary DNS address provided by your ISP.

- **Alternate DNS Address:** Enter the secondary address if your ISP provides, and it is optional.
- **HostName:** The device's wins name. You can directly use it to access the device.

**NOTE:** *If you change the device' LAN IP address, you have to enter the new one in your browser get back into the web-based configuration utility.*

## 5.2 WAN Settings

### 5.2.1 3G WAN

The screenshot shows the Tenda web interface for configuring 3G WAN settings. The main navigation bar includes 'Advanced Settings', 'Wireless Settings', 'DHCP Server', 'Security Settings', 'Routing Settings', and 'System Tools'. The 'WAN Settings' tab is active. The '3G Internet Connection Settings' section contains a dropdown for 'ISP' (with a link to 'ISP Information'), and input fields for 'Access Point Name' and 'Dial Number'. The 'Advanced PPP Settings' section includes 'User Name' and 'Password' fields, and radio buttons for 'Reconnect Automatically' (selected) and 'Reconnect Manually'. A 'Help Information' sidebar on the right provides instructions on selecting the correct 3G modem and entering APN and Dial Number information.

The device switches to 3G router mode and dials up automatically once a 3G USB modem card is inserted. Normally, there is no need of configuration. However, if you do not access Internet successfully after 2 minutes elapse and your modem card is in the Compatibility List of 3G Modems(Refer to Appendix 5), then you need to log in to the management interface to do some configurations.

- **ISP:** Select your ISP from the drop-down list and then save it. However, if you don't find your ISP name in the list, please



select "OTHER" and input the parameters provided by your ISP.

The screenshot shows the Tenda router's configuration interface. The top navigation bar includes 'Advanced Settings', 'Wireless Settings', 'DHCP Server', 'Security Settings', 'Routing Settings', and 'System Tools'. The 'WAN Settings' tab is active. Under '3G Internet Connection Settings', the 'ISP' is set to 'OTHER'. The 'Access Point Name' is 'www.xjgprs.net' and the 'Dial Number' is '99#'. In the 'Advanced PPP Settings' section, the 'User Name' is 'xjgprs' and the 'Password' is masked with dots. The 'Reconnect Automatically' option is selected.

- **Access Point Name:** Enter the name of the AP provided by your ISP.
- **Dial Number:** Enter the Dialup information provided by your ISP.
- **User Name:** Enter the User name provided by your ISP.
- **Password:** Enter the password provided by your ISP.
- **OK:** Click it to save new settings.
- **Cancel:** Click it to restore the previous settings once problems occur in your new settings.

Click "System Status" to view the connection status between current 3G WAN port and your ISP. When it shows "Connected", you can share the 3G network service.

WAN Status	
Connection Status	connected
WAN IP Address	113.113.185.203
Subnet Mask	255.255.255.255
Gateway	115.188.82.130
Primary DNS server	192.168.2.1
Alternate DNS server	192.168.2.1
Connection type	3G WAN
Connection Up Time	00:00:00

#### Reconnect Modes:

There are four reconnect modes: Reconnect Automatically, Reconnect Manually, Reconnect on Demand, and Reconnect on Fixed Time. Please select according to your needs.

- **Reconnect Automatically:** Reconnect automatically to the Internet upon device startup or disconnection from the Internet.
- **Reconnect Manually:** Users needs to reconnect the device to Internet manually upon disconnection from the Internet.
- **Reconnect on Demand:** Reconnect to Internet automatically upon traffic present.
- **Reconnect on Fixed Time:** Reconnect to Internet automatically within the specified time length.

**NOTE:**For 3G users who subscribe data usage plan, "Reconnect on Demand" is recommended. In this mode, you

*can save your data usage as the router will disconnect automatically when your PC is shut down or there's no data being transferred. It will reconnect automatically when there is data being transferred.*

## 5.2.2 WAN Settings in Wireless Router Mode

Depending on your Internet connection types, there are 3 ways of WAN configuration.

### a. Virtual Dial-up (PPPoE)

The screenshot shows the Tenda router's web interface. At the top, there is a navigation menu with tabs for Advanced Settings, Wireless Settings, DHCP Server, Virtual Server, Security Settings, Routing Settings, and System Tools. Below this, there are sub-tabs for System Status, WAN Settings (which is selected), LAN Settings, and DNS Settings. The main content area is titled 'Mode' and is set to 'PPPoE'. It contains several input fields: 'User Name' (filled with 'pppoe\_user'), 'Password' (filled with asterisks), 'MTU' (filled with '1492'), 'Service name', and 'Server name'. Below these fields, there are three radio button options for connection behavior: 'Reconnect Automatically' (selected), 'Reconnect Manually', and 'Reconnect on Demand'. A 'Help Information' sidebar on the right explains that PPPoE asks the ISP whether to use PPPoE and that a user name and password are required.

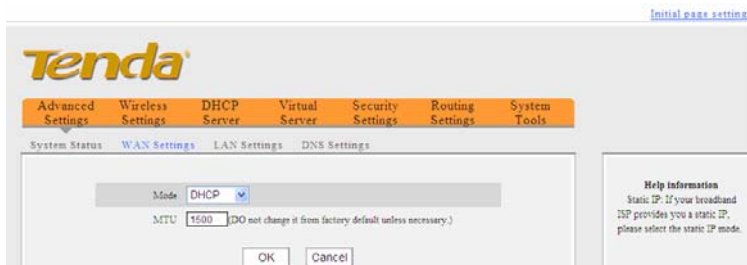
- **Mode:** Displays the currently selected connection type.
- **User name:** Enter the user name provided by your ISP
- **Password:** Enter the password provided by your ISP.
- **MTU:** Maximum Transmission Unit. DO NOT change it from the factory default of 1492 unless necessary. You may need to change it for optimal performance with some specific websites or application software that can not be opened or disabled; in

this case, try 1450, 1400, etc.

- **Service Name:** It is the currently set PPPoE connection. Leave it blank unless necessary.
- **Server:** It is the server name. Leave it blank unless necessary.
- **Reconnect Automatically:** Reconnect automatically to the Internet upon device startup or disconnection from the Internet.
- **Reconnect Manually:** Users needs to reconnect the device to Internet manually upon disconnection from the Internet.
- **Reconnect on Demand:** Reconnect to Internet automatically upon traffic present.
- **Reconnect on Fixed Time:** Reconnect to Internet automatically within the specified time length.

**Note:** *To activate the "Reconnect on Fixed Time" feature, you must first configure current time on the "Time" screen under "Tools" menu.*

b. Dynamic IP



- **MTU:** Maximum Transmission Unit. DO NOT change it from the

factory default of 1500 unless necessary. You may need to change it for optimal performance with some specific websites or application software that can not be opened or enabled; in this case, try 1450, 1400, etc.

### c. Static IP

If the Internet connection type provided by your ISP is static IP, Click the "Advanced Setting" ---"WAN Settings" and select "Static IP" from the Internet Connection Type drop-down menu. You need to enter the IP address, subnet mask, Primary DNS and secondary DNS values in corresponding fields.

The screenshot shows the Tenda router's web interface. At the top, there is a navigation bar with tabs for Advanced Settings, Wireless Settings, DHCP Server, Virtual Server, Security Settings, Routing Settings, and System Tools. Below this, there are sub-tabs for System Status, WAN Settings (selected), LAN Settings, and DNS Settings. The main content area is titled 'WAN Settings' and shows a 'Mode' dropdown menu set to 'Static IP'. Below this are input fields for 'IP address' (0.0.0.0), 'Subnet Mask' (0.0.0.0), 'Gateway' (0.0.0.0), 'Primary DNS server' (empty), and 'Alternate DNS server' (empty, with '(Optional)' text). At the bottom, there is an 'MTU' field set to '1500' with a note '(DO not change it from factory default unless necessary)'. There are 'OK' and 'Cancel' buttons at the bottom. On the right side, there is a 'Help Information' section with text: 'Dynamic IP: If your ISP uses DHCP server, please select DHCP, and your ISP will automatically assign these values to you (includes the DNS server)'.

- **Mode:** Displays the currently selected Internet connection type.
- **IP Address:** Enter the WAN IP address provided by your ISP. If you are not clear, please inquire your ISP.
- **Subnet Mask:** Enter the WAN Subnet Mask. The default value is 255.255.255.0.
- **Gateway:** Enter the WAN Gateway provided by your ISP.
- **Primary DNS Address:** Enter the necessary address

provided by your ISP.

- **Alternate DNS Address:** Enter the second address if your ISP provides, and it is optional.
- **MTU:** Maximum Transmission Unit. DO NOT change it from the factory default of 1500 unless necessary. You may need to change it for optimal performance with some specific websites or application software that can not be opened or enabled; in this case, try 1450, 1400, etc.

### 5.3 DNS Settings

The Domain Name System (DNS) is a hierarchical naming system for computers, services, or any resource connected to the Internet or a private network. It functions just as the "phone book" for the Internet by translating human-friendly domain names into numerical identifiers of IP addresses for the purpose of locating and addressing these devices worldwide.

[Initial page settings](#) [Log out](#)

**Tenda®**

Advanced Settings | Wireless Settings | DHCP Server | Virtual Server | Security Settings | Routing Settings | System Tools

System Status | WAN Settings | LAN Settings | **DNS Settings**

DNS setting

Primary DNS address

Alternate DNS address (Optional)

Note: After the settings are completed, reboot the device to activate the modified settings.

OK Cancel

**Help Information**  
Enter the IP address provided by your ISP in the DNS server fields. The DNS server will translate domain names into IP addresses for your router.  
To manually configure specific IP addresses for the DNS servers, check the Manual DNS Settings box; To obtain DNS server IP addresses from your ISP automatically, leave the same box unchecked.

**DNS Setting:** Check the box to configure DNS settings manually and bring them into effect. The built-in DHCP server will allocate the added DNS server address to the requesting client. To obtain DNS server IP addresses from your ISP automatically, leave the box unchecked.

**Primary DNS address:** Enter the DNS server address provided by your ISP.

**Alternate DNS Address:** Enter the secondary DNS address if your ISP offers you 2 DNS addresses (Optional).

**Note:** *To activate the modified settings, reboot the device.*

## Chapter 6 Wireless Settings

### 6.1 Basic Settings

[Initial page settings](#)

The screenshot shows the Tenda web interface for configuring wireless settings. The top navigation bar includes: Advanced Settings, **Wireless Settings**, DHCP Server, Virtual Server, Security Settings, Routing Settings, and System Tools. Below this, the 'Basic Settings' tab is selected, with sub-tabs for 'Wireless Security' and 'Wireless Clients'. The main configuration area contains the following fields:

- IEEE802.11 Mode: 11b/g/n mixed mode (dropdown)
- SSID: Tenda\_305018 (text input)
- Broadcast SSID:  Enable  Disable
- BSSID: 00:0C:43:30:50:18 (text input)
- Channel: AutoSelect (dropdown)
- Channel Bandwidth:  20  20/40
- Extensional Channel: Auto Select (dropdown)

At the bottom of the configuration area are 'OK' and 'Cancel' buttons. On the right side, there is a 'Help information' section:

**Help information**  
You only need to set the basic wireless information on this page. It is suggested that you only change the SSID and channel, and keep the other items at their default settings. SSID is the network name shared by all the devices in the wireless network.  
When the wireless clients search for the wireless networks to connect to in the area, they detect the SSID broadcast via the router. If selected, the router will broadcast its SSID to all wireless hosts.  
You can select Auto-select

- **IEEE802.11 Mode:** Select one wireless mode according to your wireless clients from the drop-down menu.
- **11b mode:** Select it if you have only Wireless-B clients in your wireless network.
- **11g mode:** Select it if you have only Wireless-G clients in your wireless network.
- **11b/g mixed mode:** Select it if you have only Wireless-B and Wireless-G clients in your wireless network.
- **11b/g/n mixed mode:** Select it if you have Wireless-B, Wireless-G and Wireless-N clients in your wireless network.
- **SSID:** SSID (Service Set Identifier) is the unique name of a wireless network. It is changeable and compulsory.
- **Broadcast (SSID):** Select "Disable" to hide your SSID. With this option disabled, no wireless clients will be able to see your wireless network when they perform a scan to see what's available. If they want to connect to your router, they will have to first know your SSID and then manually enter it on their devices.
- **BSSID:** Basic Service Set Identifier of wireless network. In IEEE802.11, BSSID is the MAC address of a wireless AP.
- **Channel:** Indicates the channel setting for the 3G150B. The Channel can be changed to fit the channel setting for an existing wireless network or to customize the wireless network. From the drop-down list, you can select a most effective channel, which ranges from 1 to 13. You can also select "Auto



Select” to let system detect and choose one that best fits your network.

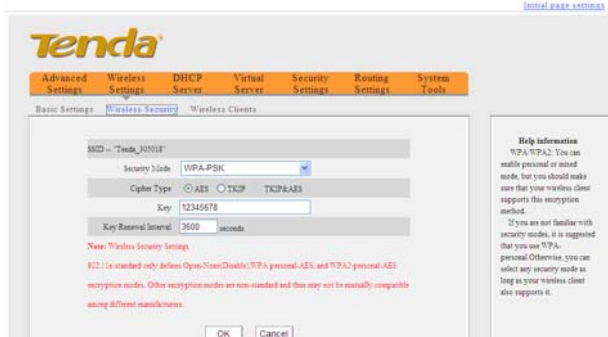
- **Extensional Channel:** Indicates the network frequency range for 11n mode.
- **Channel Bandwidth:** Select a proper channel bandwidth to enhance wireless performance. When there are 11b/g and 11n wireless clients, please select the 802.11n mode of 20/40M frequency band; when there are only non-11n wireless clients, select 20M frequency band mode; when the wireless network mode is 11n mode, please select 20/40 frequency band to boost its throughput.

## **6.2 Wireless Security**

This section allows you to configure wireless encryption. The device supports WPA-Personal, WPA2-Personal and mixed WPA/WPA2-Personal. Wi-Fi Protected Access (WPA) and Wi-Fi Protected Access II (WPA2) are two security protocols and security certification programs developed to secure wireless computer networks. It is strongly suggested that you use AES of WPA-personal to encrypt your wireless network to block unauthorized and undesired share of Internet connection. The following introduces two commonest encryption methods (Wireless network adapters need the required security key to connect to your device, once you encrypt it. for configuration methods, please refer to Appendix 2).

## 6.2.1 WPA-PSK

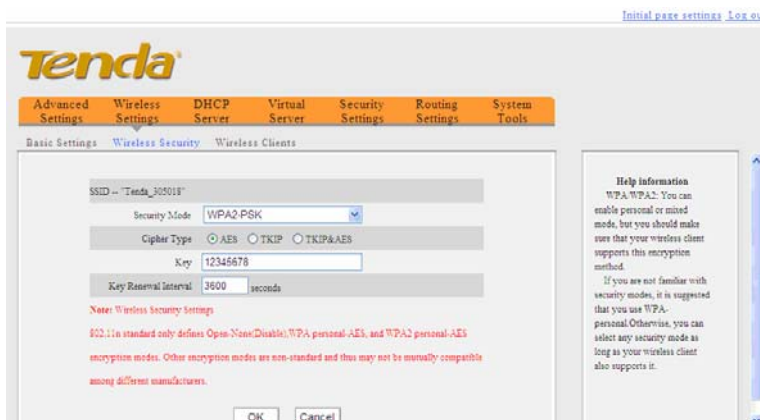
The WPA protocol implements the majority of the IEEE 802.11i standard. It enhances data encryption through the Temporal Key Integrity Protocol (TKIP) which is a 128-bit per-packet key, meaning that it dynamically generates a new key for each packet. WPA also includes a message integrity check feature to prevent data packets from being hampered with. Only authorized network users can access the wireless network.



- **Security Mode:** Select a proper mode that is also supported by your wireless clients.
- **Cipher Type:** Select either AES (advanced encryption standard) or TKIP (temporary key integrity protocol) type.
- **Key:** Enter a security key, which must be between 8-63 ASCII characters.
- **Key Renewal Interval:** Set a valid period for the security key.

## 6.2.2 WPA2-PSK

The later WPA2 protocol features compliance with the full IEEE 802.11i standard and uses Advanced Encryption Standard (AES) in addition to TKIP encryption protocol to guarantee better security than that provided by WEP or WPA.



- **Security Mode:** Select a proper mode that is also supported by your wireless clients.
- **Cipher Type:** Select a cipher type from AES (advanced encryption standard), TKIP (temporary key integrity protocol) and TKIP&AES.
- **Key:** Enter a security key, which must be between 8-63 ASCII characters.

- **Key Renewal Interval:** Set a valid period for the security key.

## 6.3 Wireless Clients

This interface displays the information of currently connected wireless clients including MAC addresses and bandwidth.



This page displays the connection information of the wireless router.

The currently connected hosts list:

ID	MAC Address	Bandwidth
0	00:B0:8C:5A:9D:91	20M

**Help information**  
MAC Address: Shows current MAC addresses of the hosts connected to the Router.  
Bandwidth: Shows current frequency bandwidth the wireless client equipment uses.

**MAC Address:** Displays the wireless MAC addresses of the PCs that have been connected to your router.

**Bandwidth:** Displays the channel frequency width used by the currently connected hosts (Connected wireless clients).

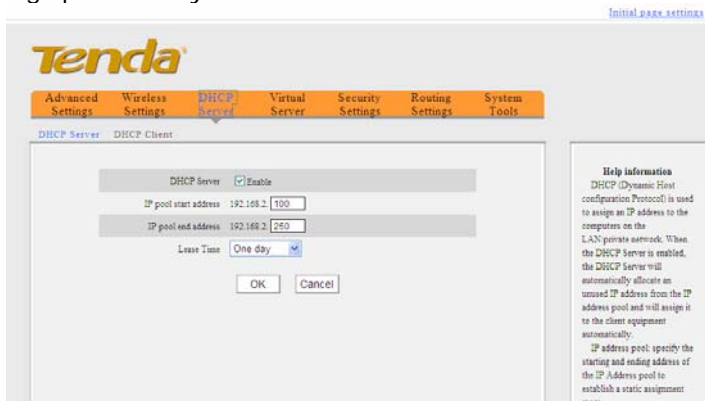
**Note:** *"Bandwidth" refers to the wireless channel bandwidth instead of wireless connection rate.*

## Chapter 7 DHCP Server

DHCP server works only in 3G Router and wireless Router modes.

### 7.1 DHCP Server

The Dynamic Host Configuration Protocol (DHCP) is an automatic configuration protocol used on IP networks. If you enable the built-in DHCP server on your device, it will automatically configure the parameters of TCP/IP protocol for all your LAN computers (including IP address, subnet mask, gateway and DNS etc), eliminating the need for manual intervention. Be sure to set your computers to be DHCP clients by setting their TCP/IP settings to "Obtain an IP Address Automatically". When you turn your computers on, they will automatically load the proper TCP/IP settings provided by the 3G150B.



- **DHCP Server:** Check or uncheck the box to Enable or disable the device's DHCP server feature.
- **IP pool start address:** Enter the starting IP address for the DHCP server's IP assignment.
- **IP pool end address:** Enter the ending IP address for the DHCP server's IP assignment.
- **Lease Time:** The length of time for the IP address lease. Configuring a proper lease time improves the efficiency for the DHCP server to reclaim disused IP addresses.

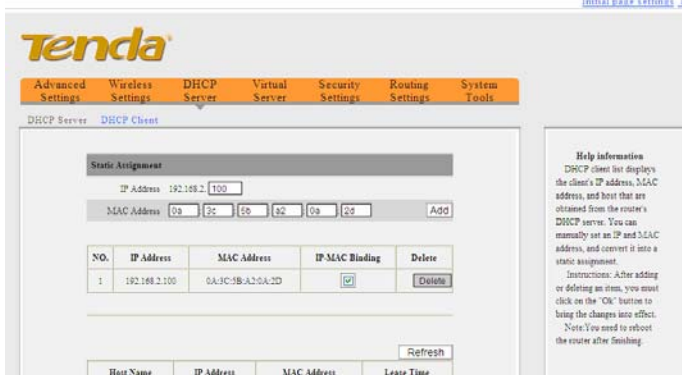
For example:

If the lease time is an hour, then DHCP server will reclaim IP addresses every hour.

## **7.2 DHCP Clients**

DHCP client list displays the IP addresses, which clients obtained from the device's DHCP server, MAC addresses, host names and lease time. If you would like some devices on your network to always have fixed IP addresses, you can manually add a DHCP Reservation for each such device. You can manually add an IP address and a MAC address and check the IP-MAC Binding option, and then whenever a host with this MAC address connects to the router, it will always get the same IP address (the one you just added). According to the connected computer's MAC address, the router checks relevant entries in its DHCP reservation list and decides what IP address to assign to this host (an unused IP from

DHCP IP address pool, or a reserved one): If it fails in finding a reserved IP address bound to the PC with this MAC address in the list, it will immediately assign an unused IP from its DHCP IP address pool; and if such IP is found, it will be assigned to this host so as to ensure that host with a DHCP reservation always get this fixed reserved IP address. Once a host registers DHCP reservation to have a fixed IP address bound to its MAC address, it can not use a different IP address except this one to connect to the router for Internet access. Thus, due to DHCP reservation, a host is prevented from escaping monitoring by changing its IP address.



- **IP Address:** Enter the IP address which needs static binding.
- **MAC Address:** Enter the MAC address of the computer you want to bind.
- **Host name:** It displays the name of the bound computer.

**Lease Time:** The remaining time for the corresponding IP address lease.

## Chapter 8 Virtual Server

The Virtual Server feature works in Wireless Router mode only.

### 8.1 Port Forwarding

Port forwarding feature allows you to open a single or a range of WAN service ports and redirect all traffic received through these ports to a LAN server with a designated IP address. It allows remote computers, such as computers on the Internet, to connect to a specific computer or service within a private local area network (LAN).

[Initial page settings](#) [Log](#)

**Tenda®**

Advanced Settings | Wireless Settings | DHCP Server | **Virtual Server** | Security Settings | Routing Settings | System Tools

Port Forwarding | DMZ | UPNP

The port forwarding feature allows you to open a single or a range of WAN service ports and redirect all traffic received through these ports to a LAN server with a designated IP address. It allows remote computers, such as computers on the Internet, to connect to a specific computer or service within a private local area network (LAN).

ID	Start port-End port	LAN IP	Protocol	Enable	Delete
1.	<input type="text"/> <input type="text"/>	192.168.2. <input type="text"/>	TCP	<input type="checkbox"/>	<input type="checkbox"/>
2.	<input type="text"/> <input type="text"/>	192.168.2. <input type="text"/>	TCP	<input type="checkbox"/>	<input type="checkbox"/>
3.	<input type="text"/> <input type="text"/>	192.168.2. <input type="text"/>	TCP	<input type="checkbox"/>	<input type="checkbox"/>
4.	<input type="text"/> <input type="text"/>	192.168.2. <input type="text"/>	TCP	<input type="checkbox"/>	<input type="checkbox"/>
5.	<input type="text"/> <input type="text"/>	192.168.2. <input type="text"/>	TCP	<input type="checkbox"/>	<input type="checkbox"/>
6.	<input type="text"/> <input type="text"/>	192.168.2. <input type="text"/>	TCP	<input type="checkbox"/>	<input type="checkbox"/>
7.	<input type="text"/> <input type="text"/>	192.168.2. <input type="text"/>	TCP	<input type="checkbox"/>	<input type="checkbox"/>

Start Port-End Port: Enter WAN service ports.  
 Enable: Check the "Enable" option to activate the corresponding rule next to it.  
 Delete: Check the "Delete" option to delete the corresponding rule next to it.  
 Add to: Click it to add a selected Well-Known Service Port to the Start Port-End Port boxes of the rule you are selecting.

- **Start/End Port:** Enter the service port range provided by the mapped host in internal network.
- **LAN IP:** The IP address of the computer which is used as a



server in LAN.

- **Protocol:** Includes TCP, UDP and Both. Select “Both” when you are not sure about which protocol to use.
- **Enable:** Check the “Enable” option to activate the corresponding rule next to it.
- **Delete:** Check the “Delete” option to delete the corresponding rule next to it.
- **Well-Known Service Port:** The “Well-Known Service Port” provides commonly used protocol ports. Select one from them and then click the “Add to” button to automatically add selected port to the Start Port-End Port fields of the corresponding rule ID. You can also manually add the ports which are not included in the “Well-Known Service Port”.
- **Add to:** Add a selected Well-Known Service Port to the Start Port-End Port boxes of the rule you select.

For example:

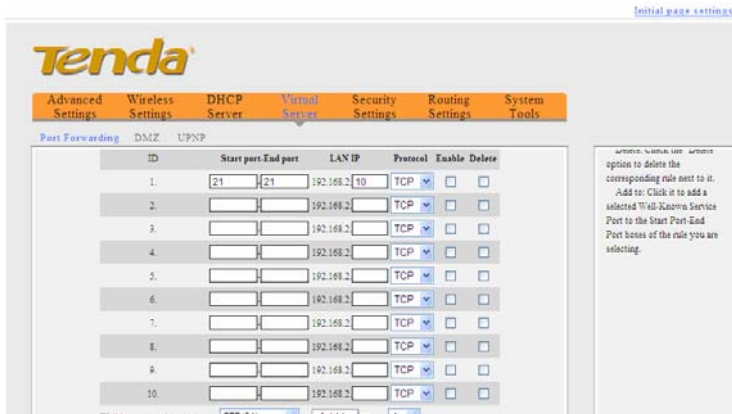
You want to share some large files with your friends who are not in your LAN; however it is not convenient to transfer such large files. Then, you can set up your own PC as a FTP server and use the port range forwarding feature to let your friends access these files. Provided that the static IP address of the FTP server (Namely, your PC) is 192.168.2.10 and you want your friends to access this FTP server through default port 21 and TCP protocol, then you can follow the steps below for configurations.

1. Enter 21 for both the start and end port in ID 1, or select "FTP"

from "Well-Known Service Port" and port 21 will be added automatically to ID 1.

2. Enter 192.168.2.10 for the "IP Address", select "TCP" and then select "Enable".

3. The configured parameters are shown in the screen below.



4. Click "OK".

Now, your friends only need to enter ftp://xxx.xxx.xxx.xxx:21 in their browsers to access your FTP server. xxx.xxx.xxx.xxx is the device's WAN IP address. For example, if it is 172.16.102.89, then your friends only need to enter "ftp://172.16.102.89: 21" in address fields of their respective browsers.

## 8.2 DMZ Settings

In some cases, we need to set a computer to be completely exposed to extranet for implementation of a 2-way communication. To do so, we set it as a DMZ host.



- **DMZ Host IP Address:** Enter the IP address of a LAN computer which you want to set to a DMZ host.
- **Enable:** Check/uncheck to enable/disable the DMZ host.

For example:

You can set a LAN computer at the IP address of 192.168.2.10 as a DMZ Host to intercommunicate with another host on the Internet.

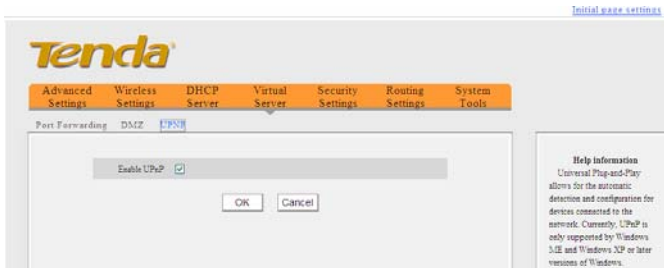
NOTE:

If you set a PC to a DMZ host, it will be completely exposed to extranet and gains no more protection from the device firewall.

### 8.3 UPnP Settings

UPnP (Universal Plug and Play) works in Windows XP, Windows ME or later operational systems (NOTE: Operational system needs to be integrated with or installed with Directx 9.0) or in an environment with installed application software that supports UPnP. It allows a network device to discover and connect to other devices

on the network. With this feature enabled, hosts in LAN can request the device to perform special port forwarding so as to enable external hosts to access resources on internal hosts.

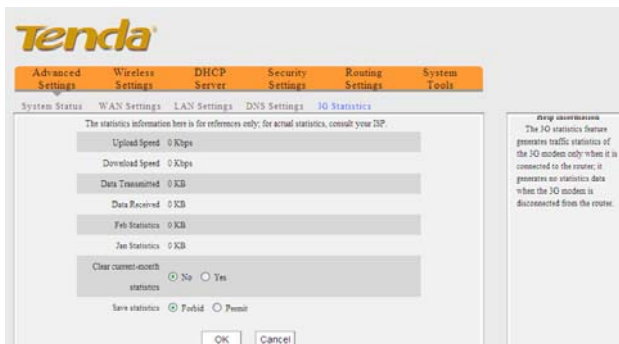


- **Enable UPnP:** Check/uncheck to enable/disable the UPnP.

## Chapter 9 3G Statistics

### 9.1 3G Statistics

When connected to 3G network, the device can record 3G data usage. To view data usage or transferring rate in the last 2 months, click the "3G Statistics". And you will know your data usage and bill.



**Note:** This feature is for 3G WAN mode ONLY.

## Chapter 10 Security Settings

The security settings illustrated below are for 3G Router, and Wireless Router modes only. For that of wireless access point (AP) mode, please refer to Chapter 6.

### 10.1 Client Filter

To better manage the computers in LAN, you can regulate LAN computers' access to some ports on Internet through using Client Filter functionality.

The screenshot shows the Tenda router's web interface. At the top, there is a navigation bar with tabs: Advanced Settings, Wireless Settings, DHCP Server, Virtual Server, Security Settings (highlighted), Routing Settings, and System Tools. Below this, there are sub-tabs: Client Filter, MAC Address Filter, URL Filter, and Prevent Network Attack. The Client Filter tab is active, showing the following configuration options:

- Enable:** A checked checkbox.
- Clear this item:** A button labeled "Clear".
- Filter Mode:** Two radio buttons: "only forbid access to Internet" (selected) and "only permit access to Internet".
- Commentary:** A text input field containing "web".
- Start IP:** A text input field containing "192.168.2".
- End IP:** A text input field containing "100".
- Port:** Two empty text input fields.
- Type:** A dropdown menu set to "TCP".
- Time:** A time selection interface with dropdowns for hours (9), minutes (0), and seconds (0).
- Date:** A checked checkbox for "Everyday" and radio buttons for "Sun", "Mon", "Tue", "Wed", "Thu", "Fri", and "Sat".

On the right side of the page, there is a help text box that reads: "functionality to regulate LAN computers' access to Internet. For details, refer to User Guide. To clear settings of an already configured filter rule, select it and click the 'Clear' button, and then the 'OK' button. Note: 0-0-0-0 means all the time."

- **Client Filter:** Check/uncheck the box to enable/disable client filter.
- **Filter Rule:** Select a number (indicating a filter rule) from the drop-down menu.

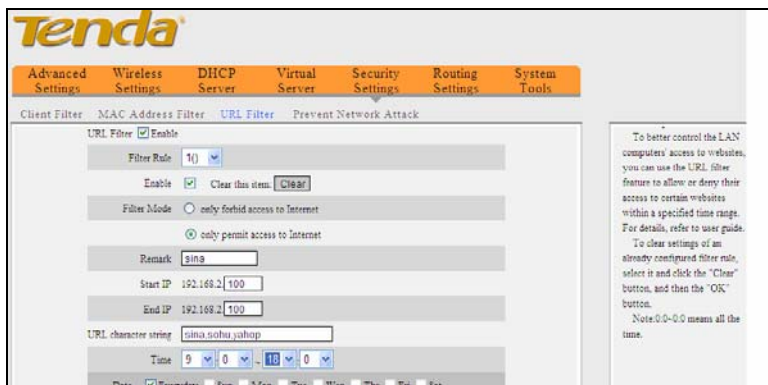
- **Enable:** Check/uncheck to enable/disable the selected filter rule.
- **Filter Mode:** Click the “only forbid access to Internet” radio button to prohibit hosts at specified IP addresses from accessing only Internet through the device via specified ports within a specified length of time. Click the “only permit access to Internet” radio button to permit hosts at specified IP addresses to access only Internet through the device via specified ports within a specified length of time. Each filter rule takes effect on the IP addresses of its own only.
- **Commentary:** Enter a meaningful name to you for a new filter rule.
- **Start /End IP Address:** Enter a starting/ending IP address.
- **Port:** Enter TCP/UDP protocol port; it can be a port range.
- **Type:** Select a protocol or protocols for the traffic (TCP/UDP/Both).
- **Time:** Select a time range for the rule to take effect.
- **Date:** Select a date for the rule to take effect.

For example:

If you want to forbid the computer at the IP address of 192.168.2.100 from accessing the Internet from 9: 00 to 18: 00 everyday without restricting other computers in LAN, you need to configure the parameters as shown in the above diagram.

## 10.2 URL Filter

To better control the LAN computers' access to websites, you can use URL filtering to allow or deny their access to certain websites within a specified time range.



- **URL Filter:** Check the “Enable” box next to it to enable URL filter feature or uncheck the box to disable it.
- **Filter Rule:** Select a number (indicating a filter rule) from the drop-down menu.
- **Enable:** Check/uncheck to enable/disable the selected filter rule.
- **Filter Mode:** Click the “only forbid access to Internet” radio button to prohibit hosts at specified IP addresses from accessing specified Internet websites through the device within a specified length of time. Click the “only permit access



to Internet” radio button to allow hosts at specified IP addresses to access specified Internet websites through the device within a specified length of time. Each filter rule takes effect on the IP addresses of its own only.

- **Remark:** Enter a meaningful name to you for a new filter rule.
- **Start/End IP Address:** Enter the starting/ending IP address.
- **URL character string:** Enter domain names or a part of a domain name that needs to be filtered.
- **Time:** Select a time range for the new URL filter rule to take effect.
- **Date:** select a date for the new URL filter rule to take effect.
- **OK:** Click “OK” to activate the settings.

For example:

If you want to permit the computer at the IP address of 192.168.2.100 to access the web sites containing strings such as “sina”, “sohu”, and “yahoo” only from 9: 00 to 18: 00 everyday, you need to configure the parameters as the shown in the above screen.

**Note:** *A comma in DBC case should be put in between different character strings.*

### **10.3 MAC Address Filter**

To better manage the computers in LAN, you can use the MAC Address Filter function to control the computer’s access to Internet.



- **MAC Address Filter:** Check the box to enable MAC address filter or uncheck the box to disable it.
- **Filter Rule:** Select a number (indicating a filter rule) from the drop-down menu.
- **Enable:** Check to enable the selected rule.
- **Filter Mode:** Click the “only forbid access to Internet” radio button to prohibit hosts at specified MAC addresses from accessing only Internet through the device within a specified length of time. Click the “only permit access to Internet” radio button to permit hosts at specified MAC addresses to access only Internet through the device within a specified length of time. Each filter rule takes effect on the MAC addresses of its own only.
- **Remark:** Enter a meaningful name to you for a new filter rule.
- **MAC address:** Enter the computer’s MAC address that you want to be filtered in the MAC address field.
- **Time:** Select a time range for the new MAC address filter rule to take effect.

- **Date:** select a date for the new MAC address filter rule to take effect.
- **OK:** Click “OK” to activate the settings.

For example:

If you want to permit the LAN computer at the MAC address of 00:22:15:55:2A:15 to access the Internet during 9: 00~18: 00 from Monday to Friday only, you need to configure the parameters as shown in the above screen.

## 10.4 Preventing Network Attack

Check to enable the router’s Network Attack Prevention function. The device limits the host’s bandwidth automatically once attack is detected. The attacker’s IP address can be found in the “Syslog” under the “System Tools” menu.



**Prevent Network Attack:** Check/uncheck the box to enable/disable this feature.

## Chapter 11 Routing Settings

This page displays the router's core routing table which lists destination IP address, subnet mask, gateway, hop count and interface.



The screenshot shows the Tenda router's web interface. At the top, there is a navigation menu with tabs: Advanced Settings, Wireless Settings, DHCP Server, Virtual Server, Security Settings, Routing Settings (selected), and System Tools. Below the menu, the page title is "Routing table". The main content area contains a table with the following data:

Destination IP	Subnet Mask	Gateway	Hops	Interface
192.168.2.0	255.255.255.0	0.0.0.0	0	br0

Below the table is a "Refresh" button. To the right of the table, there is a "Help information" section that explains that HOPS is used to determine the interface metrics and lists three types of interfaces: eth2.2 WAN interface, ppp0/PPPoE interface, and br0 LAN interface.

The main duty for a router is to look for an optimal transfer path for each data packet passing through it, and transfer it to the specified destination. So, it's essential for the router to select an optimal path, i.e. routing algorithm. To complete this work, the router stores the related information of various transfer paths, i.e. establishing a routing table, for future route selection.

## Chapter 12 System Tools

### 12.1 Time Settings

This section assists you in setting the device's system time; you can either select to set the time and date manually or automatically obtain the GMT time from Internet.

**Time zone:** (GMT+08:00)Beijing, Chongqing, Hong Kong, Urumqi

(Note: GMT time can only be obtained once the router is connected to the Internet.)

**Customized time:**

Year: 2011 Month: 8 Date: 23 Hour: 16 Minute: 25 Second: 41

OK Cancel

**Help information**  
This window is used to select the time zone for your location. If you turn off the Router, the time settings will be lost. You can either set the time manually or get the GMT time from the Internet, and the system will automatically connect to the NTP server to synchronize the time.  
Note: When the Router is powered off, the time settings will reset. For the router to obtain the correct GMT time automatically, you will need to connect it to the Internet first. Otherwise, please set the time

- **Time Zone:** Select your time zone from the drop-down menu.
- **Customized time:** Enter the time and date manually.

**NOTE:** *The configured time information loses once the device is powered off. But it obtains the GMT time automatically when you reconnect it to the Internet. Features/functions based on time (e.g. security settings) take effect only after Time and*

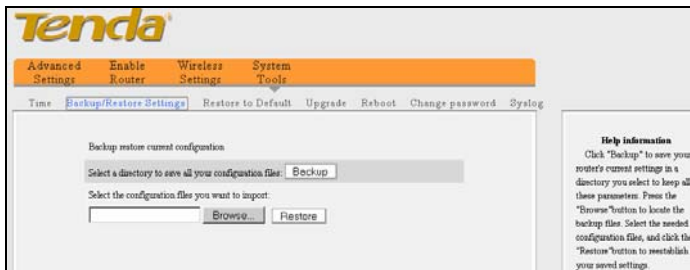
*Date setting is configured or updated automatically from Internet.*

## 12.2 Backup/Restore Settings

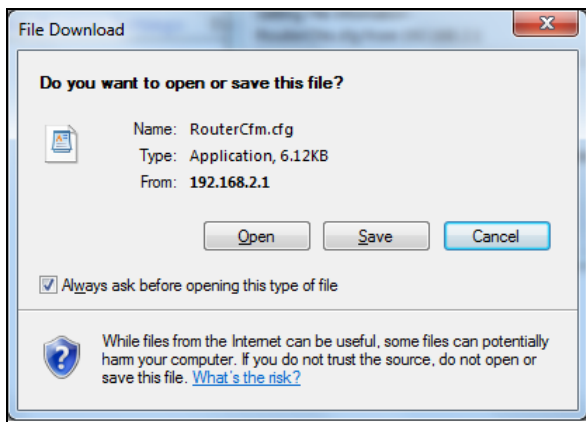
This section allows you to backup current configuration files or to restore the previous files of the device.

### 12.2.1 Backup Settings

Once you have configured the router the way you want it, you can save these settings to a configuration file on your local hard drive that can later be imported to your router in case that the router is restored to factory default settings. To do this, click the “Backup” button next to where it says “Select a directory to save your configuration files” on the screen below.

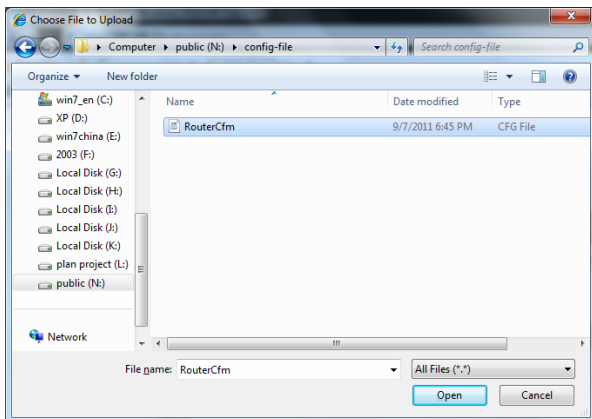


And then, click the “Save” button on the appearing screen below to store it under the selected path.

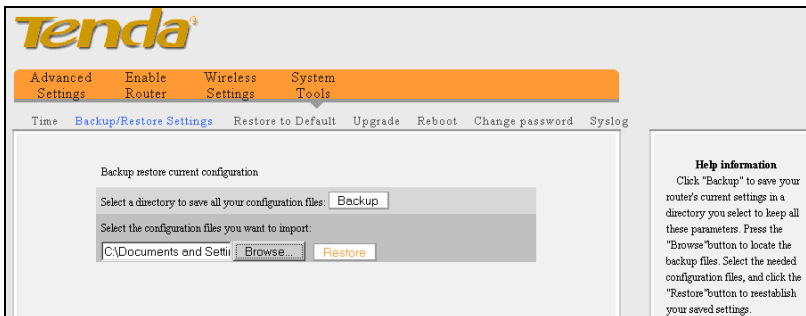


## 12.2.2 Restore Settings

Click the "Browse" button to locate and select a configuration file that is saved previously to your local hard drive.

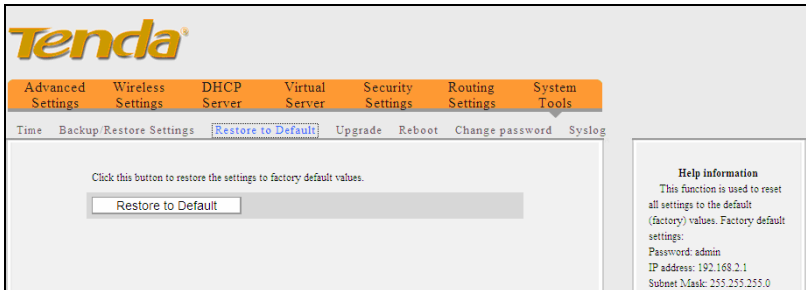


And then click the "Restore" button to reset your router to previous settings.'



### 12.3 Restore to Factory Default Settings

To restore all settings to the device's factory default values, click the "Restore to Default" button on the interface below:



Factory Default Settings:

- **User Name:** admin
- **Password:** admin



- **IP Address:** 192.168.2.1
- **Subnet Mask:** 255.255.255.0

**Note:** *To activate your configurations, reboot the device after you reset the router.*

## 12.4 Firmware Upgrade

Firmware upgrade is released periodically to improve the functionality of your router and also to add new features. If you run into a problem with a specific feature of the router, log on to our website (www.tenda.cn) to download the latest firmware to update your router.

The screenshot shows the Tenda router's web management interface for the firmware upgrade process. At the top, the Tenda logo is displayed. Below it is a navigation menu with tabs for 'Advanced Settings', 'Enable Router', 'Wireless Settings', and 'System Tools'. The 'Upgrade' option is selected and highlighted in blue. Below the navigation menu, there are several links: 'Time', 'Backup/Restore Settings', 'Restore to Default', 'Upgrade', 'Reboot', 'Change password', and 'Syslog'. The main content area contains the following text and controls:

By upgrading the router software, you get new features.

Select the firmware file:

Current system version: V3.33.05\_EN, Publishing date Aug 22 2011

Note: Don't power off the router while upgrading, otherwise you run the risk of permanently damaging the unit. Please allow a few minutes for the upgrading process to complete. When finished, the Router will reboot automatically.

**Help information**  
Log onto our website (www.tenda.com.cn) to download the latest firmware and upgrade the router.  
Browse: Click this button to locate and select the firmware upgrade (update) file.  
Upgrade: Click this button to start updating. After the upgrade is completed, the Router will reboot automatically.

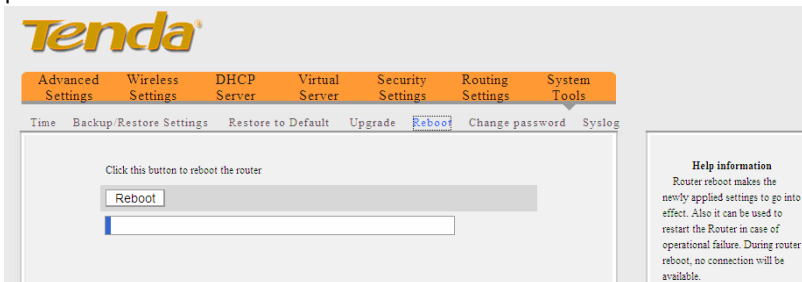
- **Browse:** Click this button to select an upgrade file.
- **Upgrade:** Click this button to start an upgrading process. After the upgrade is completed, the Router will reboot automatically.

**NOTE:** *Do not disconnect the router from your management PC or power off the router during the upgrade process; otherwise, it may be permanently*

*damaged. The router will restart automatically when the upgrade process, which takes several minutes, completes.*

## 12.5 Reboot

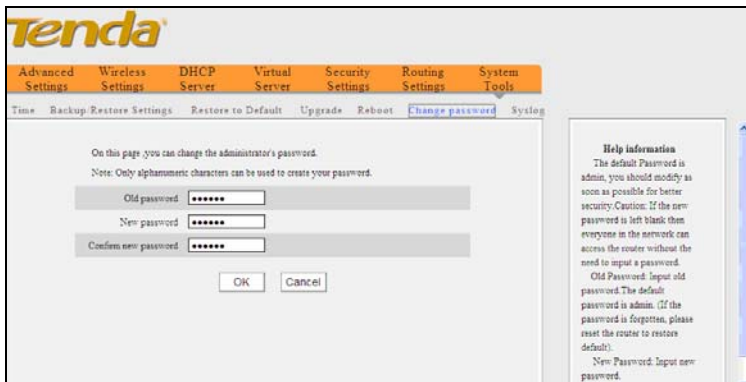
By Rebooting the device, modified settings can be brought into effect. And WAN connection will be cut automatically during this process.



- **Reboot:** Click this button to reboot the device.

## 12.6 Change Password

On the screen below, you can change the password for login to the device's Web-based interface.



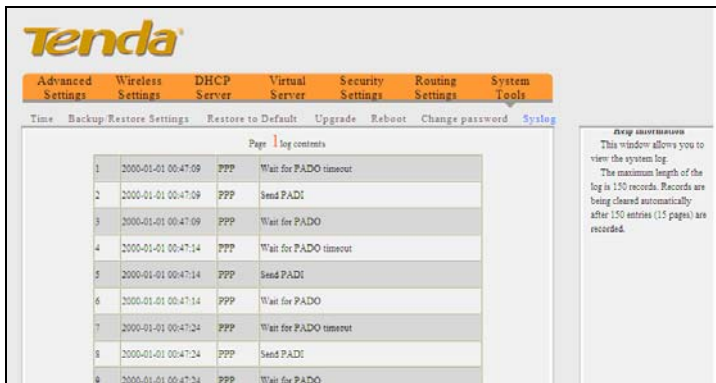
- **Old Password:** Enter the old password.
- **New Password:** Enter a new password.
- **Confirm new Password:** Re-enter the new password for confirmation.

If you enter a correct old password, then clicking the "OK" button saves your new password.

**NOTE:** *For the sake of security, it is highly recommended that you change the device's default password and user name.*

## 12.7 SysLog

The Syslog option allows you to view all events that occur upon system startup and check whether there is attack on your network. The device records a maximum of 150 logs.



The screenshot shows the Tenda router's web interface. At the top, there is a navigation menu with tabs: Advanced Settings, Wireless Settings, DHCP Server, Virtual Server, Security Settings, Routing Settings, and System Tools. Below the menu, there are several utility links: Time, Backup, Restore Settings, Restore to Default, Upgrade, Reboot, Change password, and Syslog. The Syslog page is active, displaying a table of log entries. The table has columns for Time, Action, and Description. The log entries are as follows:

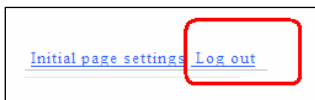
Time	Action	Description
2000-01-01 00:47:09	PPP	Wait for PADO timeout
2000-01-01 00:47:09	PPP	Send PADI
2000-01-01 00:47:09	PPP	Wait for PADO
2000-01-01 00:47:14	PPP	Wait for PADO timeout
2000-01-01 00:47:14	PPP	Send PADI
2000-01-01 00:47:14	PPP	Wait for PADO
2000-01-01 00:47:24	PPP	Wait for PADO timeout
2000-01-01 00:47:24	PPP	Send PADI
2000-01-01 00:47:24	PPP	Wait for PADO

On the right side of the Syslog page, there is a 'Log information' section with the following text: 'This window allows you to view the system log. The maximum length of the log is 150 records. Records are being cleared automatically after 150 entries (15 pages) are recorded.'

- **Refresh:** Click this button to update the log.
- **Clear:** Click this button to clear the log record.

## 12.8 Logout

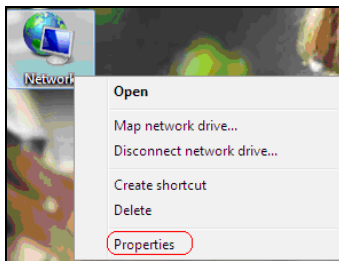
After you have finished all settings, click the Logout tab the on top right corner of the screen and then the “Yes” button appearing window to exit the utility.



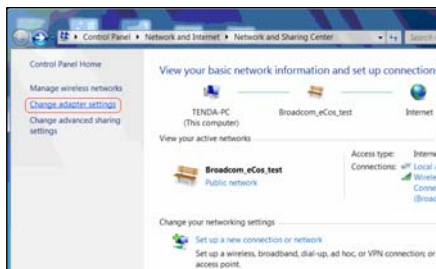
## Appendix 1 How to set a PC to obtain an IP address automatically?

If you have enabled DHCP function on your device (It is disabled by default.), you can set your PC to obtain an IP address automatically. And DHCP will automatically allocate an IP, gateway and DNS addresses to your PC so that your PC can access Internet via the device. To do so, follow the configuration steps below. The examples below are illustrated in Windows® 7.

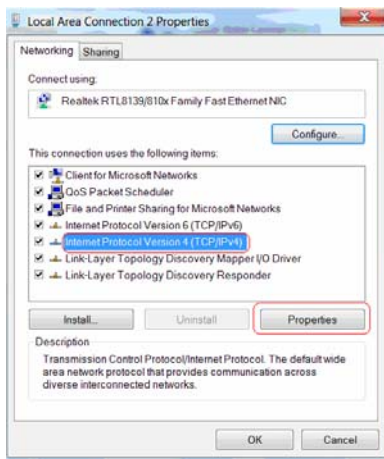
1). Click the “Network” icon on your computer’s desktop and select “Properties”.



2). Select “Change adapter settings” in the appearing window.



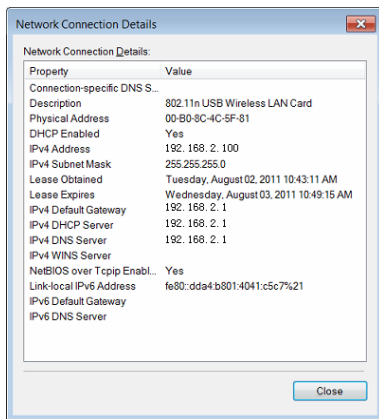
- 3). Right click “Local Area Connection” (Select “Wireless Network Connection”, if you are using a wireless connection.) and select “Properties” in the following window.
- 4). Select “Internet Protocol Version 4(TCP/IPv4)” and then click “Properties”.



- 5). Select “Obtain an IP address automatically” and “Obtain DNS server address automatically”. Click “OK” to save the configurations.



6). View “Local Area Connection-- Status” -> “support” dialogue box to check whether an IP address has been successfully assigned as below.



## **Appendix 2 How to set a wireless network adapter to connect to the device after it is encrypted?**

How to configure your wireless network adapter to connect to the device after it is encrypted?

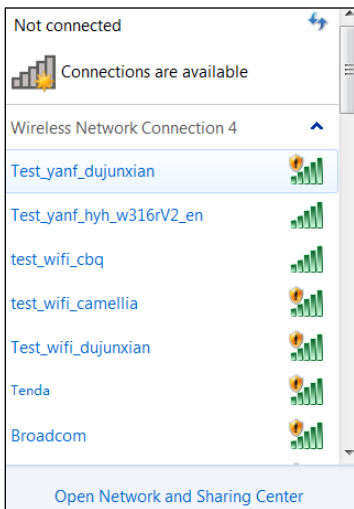
To connect your wireless adapter to the device for accessing Internet, you need to enter the configured password. Follow the steps below for configurations (Take WPA encryption as an example for illustration.):

1. Right click “My Network Places” ---- “Properties”-----“Change adapter settings”. And we can see that wireless network connection is unconnected.

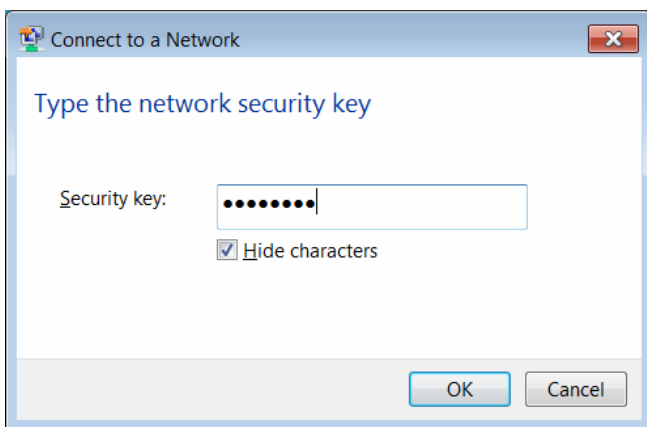


2. Right click “Wireless Network Connection” and select “View Available Wireless Networks”. All detected wireless signals will be shown in the interface below, select the SSID entitled “Tenda”. If you don’t find it, please click “Refresh Network List”.

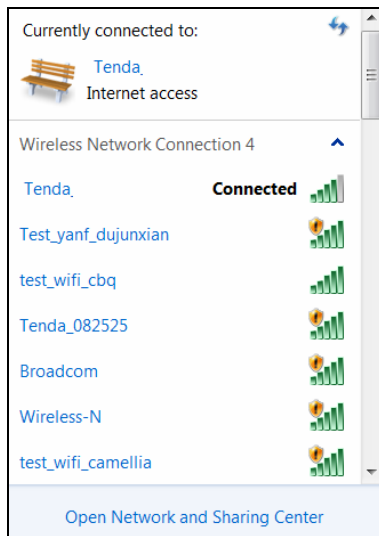




3. Select "Tenda" and click "Connect" or double-click "Tenda", input the Network key and confirm it to connect to the Router (Note: The key is case sensitive.).



4. When the configuration is successfully completed, “Connected” will be shown in the interface



## **Appendix 3 Glossary**

### **3G**

3G refers to the 3rd Generation digital communication technology. It provides application services such as multi-media, wide-area wireless voice telephone, mobile Internet access, video calls, mobile TV, e-business and etc, all in a mobile environment.

#### **TD-SCDMA**

TD-SCDMA (Time Division - Synchronous CDMA), found in UMTS mobile telecommunications networks in China, adopts TDD, in contrast to the FDD scheme used by W-CDMA. It can more easily accommodate asymmetric traffic with different data rate requirements on downlink and uplink than FDD schemes by dynamically adjusting the number of timeslots used for downlink and uplink. It also takes an advantage in spectrum allocation flexibility, as it does not require paired spectrum for downlink and uplink.

#### **CDMA2000**

CDMA2000 (also known as IMT Multi-Carrier (IMT-MC)) was put forward by Qualcomm, an American wireless telecommunications research and development company, as well as the largest fabless chip supplier in the world. It is a family of 3G mobile technology standards, transferring voice, data, and signaling data between mobile phones and cell sites using CDMA channel access.

**W-CDMA**

W-CDMA (Wideband Code Division Multiple Access), also known as CDMA Direct Spread, is found in 3G mobile telecommunications networks. It achieves higher speeds and supports more users than most TDMA schemes through DS-SS-SSS channel access method and the FDD duplexing method. Utilizing the same core network as the 2G GSM networks deployed worldwide, it allows dual-mode operation along with GSM/EDGE.

**Channel**

A communication channel, also known as channel, refers either to a physical transmission medium such as a wire or to a logical connection over a multiplexed medium such as a radio channel. It is used to transfer an information signal, such as a digital bit stream, from one or more transmitters to one or more receivers.

If there are several APs coexisting in the same area, it is recommended that you configure a different channel for each AP to minimize the interference between neighboring APs. For example, if 3 American-standard APs (i.e. adopts channel 11) coexist in one area, you can setup their channels respectively to 1, 6 and 11 to avoid mutual interference.

**SSID**

Service set identifier (SSID) is used to identify a particular 802.11 wireless LAN. It is the name of a specific wireless network. Your network's SSID should be unique to your network. A wireless client device needs to know a wireless network's SSID in order to connect

to it. A SSID can be up to 32 characters long.

## **WPA/WPA2**

Wi-Fi Protected Access (WPA) and Wi-Fi Protected Access II (WPA2) are two security protocols and security certification programs developed to secure wireless computer networks.

The WPA protocol implements the majority of the IEEE802.11i standard. Specifically, it enhances data encryption through the Temporal Key Integrity Protocol (TKIP), which replaces WEP's 40-bit or 128-bit encryption key that must be manually entered on wireless access points and devices and does not change. TKIP is a 128-bit per-packet key, meaning that it dynamically generates a new key for each packet and thus prevents collisions. WPA also includes a message integrity check feature to ensure that data packets have not been tampered with. The later WPA2 indicates compliance with the full IEEE 802.11i standard and uses Advanced Encryption Standards (AES) encryption protocol that guarantees better security.

## **WIFI**

"Wi-Fi", short for Wireless Fidelity, is a trademark of the Wi-Fi Alliance and the brand name for products using the IEEE 802.11 family of standards. It connects computers and other network devices via wireless radio instead of cables.

## **AP**

A wireless access point (AP) is a device that converts wired signal into wireless signal, meaning that it allows wireless devices to

***Tenda***<sup>®</sup>

**3G150B 150Mbps Portable 3G Wireless Router**

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connect to a wired network using Wi-Fi. It usually connects to a router via a cable to relay data between the wireless and wired devices on the network.

## Appendix 4 Troubleshooting

This chapter provides solutions to problems that may occur during the installation and operation of the device. Read the following descriptions if you are having problems. If you can not find your problem here, please go to our website [www.tenda.cn](http://www.tenda.cn) or E-mail to [support@tenda.cn](mailto:support@tenda.cn) for help.

### **1. Why can't I access the web-based configuration utility?**

Please first verify physical connectivity by checking for solid link lights on the device. If you do not get a solid link light, try using a different cable.

Then verify the device's mode. In wireless router mode, the device's LAN/WAN port functions as a WAN port only, so you can access its web-based interface via wireless connection only. In wireless access point (AP) mode, you must specify an IP address for your computer (between 192.168.2.2~192.168.2.254) to access its web-based interface. Please click "Start" -- " Run "to enter "ping 192.168.2.1" to diagnose whether the device is connected or not. If ping succeeds, then check whether you have enabled the Proxy Server feature on your browser. If enabled, you need to disable it. If ping fails, press and hold the "RESET" button on the device for over 7 seconds to restore the factory defaults, and run "ping192.168.2.1" again. And if you still can not access, please contact our technical support.

**2. What can I do if I forgot my password for accessing the web utility?**

In this case, you have to reset your device. To do so, press and hold the "RESET" button for over 7 seconds. Release the button and the device will go through its reboot process. The default password is "admin".

**3. Why does my computer show an IP address conflict after connected with the device?**

Check if there are other DHCP servers in the LAN. If there are, please disable them.

The default IP address of the device is 192.168.2.1, please make sure the address is not used by another pc or device. If there are two computers or devices with the same IP address, please modify one.

**4. My computer can neither log in to the device nor access internet, and there is a yellow triangle with a exclamation mark shown in the network adapter icon on the right bottom corner of my computer desktop; How am I supposed to deal with it?**

This problem occurs because your network card has not been assigned with an IP address. If your computer is set to obtain an IP address automatically, please ensure that the router's DHCP function is enabled. DHCP can automatically assign an IP address to your computer. If there is no DHCP, please set a static IP address and fill in gateway and DNS, otherwise you can not access Internet.



## **5. Why can't I access Internet or send and receive emails through my router?**

This may happen to ADSL and Dynamic IP users. First, you need to check whether the RJ-45 port, which serves as a WAN port, is correctly connected; if there is no problem with the physical connectivity, then, you need to modify the default MTU value (1492). Please replace the default MTU value with the recommended value of 1450 or 1400 in the "WAN Setting" interface.

## **6. How can I access Internet using Dynamic IP access mode?**

In Setup Wizard of the Web-based utility interface, select "Dynamic IP" connection type and click "Save" to activate it.

## **7. How do I share resources on my computer with users on Internet through the device?**

To let Internet users access internal servers on your LAN such as e-mail server, Web, FTP, via the device, use the "Virtual Server" feature. To do so, follows the steps below:

**Step 1:** Create your internal server, make sure the LAN users can access these servers and you need to know related service ports, for example, Web server's port is 80; FTP is 21; SMTP is 25 and POP3 is 110.

**Step 2:** Click "Virtual Server" and select "Port Forwarding" on the Router's web interface.

**Step 3:** Input the external service port, for example, 80.

**Step 4:** Input the internal Web service port, for example, 80.

**Step 5:** Input the internal server's IP address. For example, if your Web server's IP address is 192.168. 2.10, please input it.

**Step 6:** Select a communication protocol used by your internal host: TCP, UDP or ICMP.

**Step 7:** Click "OK" to activate the settings.

The following table lists some well-known application and service ports:

Server	Protocol	Service Port
WEB Server	TCP	80
FTP Server	TCP	21
Telnet	TCP	23
NetMeeting	TCP	1503、1720
MSN Messenger	TCP/UDP	File Send: 6891-6900(TCP) Voice: 1863、6901(TCP) Voice: 1863、5190(UDP)
PPTP VPN	TCP	1723
Iphone5.0	TCP	22555
SMTP	TCP	25
POP3	TCP	110

## Appendix 5 Compatibility List of 3G Modems V0.5

The following lists the 3G modems Compatible with the device.

EV-DO adapter

<b>Brand</b>	<b>Model</b>	<b>Brand</b>	<b>Model</b>
(HUAWEI )	EC1270	TXT	E-99
(HUAWEI )	EC1261	(Outsella)	Water Cube (Black)
(HUAWEI )	EC1260	(Outsella)	EC690
(HUAWEI )	EC167	(Outsella)	C819
(ZTE)	AC2726	(Outsella)	EC70
(ZTE)	AC2766	(e surfing)	—
(ZTE)	AC2746	(e surfing)	—
(ZTE)	AC582	(Rate)	EC606
(ZTE)	AC581	(PCTX)	E004

(ZTE)	AC580	(PCTX)	E005
(ZTE)	AC560	(Vtion)	E1916
(ZTE)	AC583	(Alcatel-sbell)	ASB C820
(TXT)	EV-100	(Strongrising)	SEV759
(TXT)	EV-99	(Sentar)	ST804
(TXT)	Water Cube (White)		
(TXT)	EV-91		

**WCDMA HSPA adapter**

<b>Brand</b>	<b>Model</b>	<b>Brand</b>	<b>Model</b>
(HUAWEI)	K3715	(HUAWEI)	E226
(HUAWEI)	E1752	(HUAWEI)	E272
(HUAWEI)	E173	(HUAWEI)	E510
(HUAWEI)	160G	(HUAWEI)	EC122
(HUAWEI)	E169u	(HUAWEI)	E230
(HUAWEI)	E1780	(HUAWEI)	E270
(HUAWEI)	E1756	(ZTE)	MF100

(HUAWEI)	E169	(ZTE)	MF110
(HUAWEI)	E180	(ZTE)	MF633
(HUAWEI)	E150	(ZTE)	MF637U
(HUAWEI)	E1762	(ZTE)	MF633BP+
(HUAWEI)	E261	(ZTE)	MF190(ReLI)
(HUAWEI)	E161	(ZTE)	MF190
(HUAWEI)	K3715	(ZTE)	K3570-Z
(HUAWEI)	E1780	(Sentar)	ST904
(HUAWEI)	E1750	(Sentar)	ST909
(HUAWEI)	E1612	(Sentar)	ST907
(HUAWEI)	E160E	(TXT)	W-11
(HUAWEI)	E1782	(Outsella)	W80
(HUAWEI)	E1550	(LC)	6280
(HUAWEI)	E1820	(SC)	W50
(HUAWEI)	E160G	(PCTX)	W002
(HUAWEI)	E1786	(PCTX)	W003
(HUAWEI)	K3765	(Strongrising)	SRT-H800
(HUAWEI)	E160	(Gotok)	W601
(HUAWEI)	E1630	(LMK)	6260
(HUAWEI)	UMG181	(CKC)	um 200
(HUAWEI)	E1552	(CKC)	CKC-680U
(HUAWEI)	E156G(Black)	(JY)	W80
(HUAWEI)	E1692	(Rate)	UC125

(HUAWEI)	E1556	(HSPA CRS)	—
(HUAWEI)	E156G(White)	HSPA MTNL	—
(HUAWEI)	E153	zapper	SIL 100B
(HUAWEI)	E158	beetel	MF 180
(HUAWEI)	E220	ovation	ovation 930
(HUAWEI)	E166		

#### TD-SCDMA HSDPA adapter

Brand	Model	Brand	Model
(HUAWEI)	ET127	(Alcatel-sbell)	—
(HUAWEI)	ET188	(PINSU)	TU930
(HUAWEI)	ET128-2	(Star-Net)	TD2000
(Rousing)	RX310	(Panda)	PT20

#### Note:

The 3G modem cards in the above list are compatible with this 3G Router. Please confirm that the 3G modem card you purchased is in the compatibility list. Only the cards in the compatibility list can be supported by this Router.

The compatibility list may be periodically updated, as we keep launching upgrade firmwares to support new 3G modem cards. If you find that our Router is not compatible with your 3G modem card, please visit our official website [www.tenda.cn](http://www.tenda.cn) to see whether there is a new upgrade firmware to download.

In case of any further problem, contact our technical support team:

Tel : ( 86)755-27657180

Fax: (86)755-27657178

Email: support@tenda.com.cn

It is recommended you use the extended USB cable, which is provided with your 3G modem card, to connect your 3G modem card with the 3G Router for the best performance.

### **FCC Statement**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
  - Increase the separation between the equipment and receiver.
  - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
  - Consult the dealer or an experienced radio/TV technician for help.
- To assure continued compliance, any changes or modifications not

expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example- use only shielded interface cables when connecting to computer or peripheral devices).

"The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter."

#### FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with the minimum distance of 20 cm. Operation is subject to the following two conditions:

- 1) This device may not cause interference, and
- 2) This device must accept any interference, including interference that may cause undesired operation of the device.

#### **Caution!**

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user authority to operate the equipment.